

solvents, esters and ketones, the concentration of said compound of formula (1) in said surface treatment agent being in the range of 0.001 to 5% by weight.

4. (Amended) A patterning process for forming a resist pattern on a substrate comprising the steps of applying to the substrate a surface treatment agent consisting essentially of at least one compound of the following compositional formula:

$$R^{1}R^{2}_{a}(OX)_{b}SiO_{(3-a-b)/2}$$
 (1)

wherein R^1 is a -(CH₂)_nY moiety in which Y is epoxycyclohexyl, glycidoxy, N- β -aminoethylamino, amino, N-phenylamino, mercapto or isocyanate, and n is an integer from 0 to 4; R^2 is a monovalent hydrocarbon group of 1 to 4 carbons; X is hydrogen or a monovalent hydrocarbon group of 1 to 4 carbons; "a" is 0 or 1, and "b" is 0, 1 or 2 when "a" is 0, and "b" is 0 or 1 when "a" is 1, and a solvent selected from the group consisting of alcohols, aromatic solvents, esters and ketones, the concentration of said compound of formula (1) being in the range of 0.001 to 5% by weight,

baking at 80 to 120°C, and

applying thereon a photoresist composition and patterning the photoresist composition.

Please enter the following new claims:

- The patterning process of claim 4, wherein the compound of formula (1) is applied onto the substrate to a thickness of up to 0.1 μ m.
- 8. The patterning process of claim 4, wherein R² is methyl, ethyl, propyl, butyl, or alkenyl.



- 9. The patterning process of claim 4, wherein R^2 is vinyl or propyl.
- 10. The patterning process of claim 4, wherein Y is epoxycyclohexyl, N-β-aminoethylamino, amino, N-phenylamino, mercapto or isocyanate.

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- 11. The patterning process of claim 4, wherein the compound of formula (1) comprises up to 200 silicon atoms.
- 12. A surface treatment agent according to claim 1, wherein R² is methyl, ethyl, propyl, butyl, or alkenyl.
 - 13. A surface treatment agent according to claim 1, wherein R^2 is vinyl or propyl.
- 14. A surface treatment agent according to claim 1, wherein Y is epoxycyclohexyl, N-β-aminoethylamino, amino, N-phenylamino, mercapto or isocyanate.
- 15. A surface treatment agent according to claim 1, wherein the compound of formula (1) comprises up to 200 silicon atoms.
- 16. A surface treatment agent according to claim 1 on a substrate which is a metal or metal oxide substrate.
- 17. A surface treatment agent according to claim 1 on a substrate which is aluminum, iron, nickel, copper, tantalum, gold, or an oxide thereof.
- 18. A surface treatment agent according to claim 1 on a substrate which is up to 0.1 μ m thick.
- 19. A surface treatment agent which, when applied to a substrate prior to formation of a resist pattern thereon, strengthens adhesion between the substrate and the resist pattern, the surface treatment agent comprising at least one compound of the following compositional formula:

$$R^{1}R^{2}_{a}(OX)_{b}SiO_{(3-a-b)/2}$$
 (1)

wherein R^1 is a -(CH₂)_nY moiety in which Y is epoxycyclohexyl, glycidoxy, N- β -aminoethylamino, amino, N-phenylamino, mercapto or isocyanate, and n is an integer from 0

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to 4; R² is a monovalent hydrocarbon group of 1 to 4 carbons; X is hydrogen or a monovalent hydrocarbon group of 1 to 4 carbons; "a" is 0 or 1, and "b" is 0, 1 or 2 when "a" is 0, and "b" is 0 or 1 when "a" is 1.

CON.

20. A patterning process comprising the steps of applying the surface treatment agent of claim 19 to a substrate and baking, then applying thereon a photoresist composition and patterning the photoresist --